CONSTRUCTION PLANS FOR

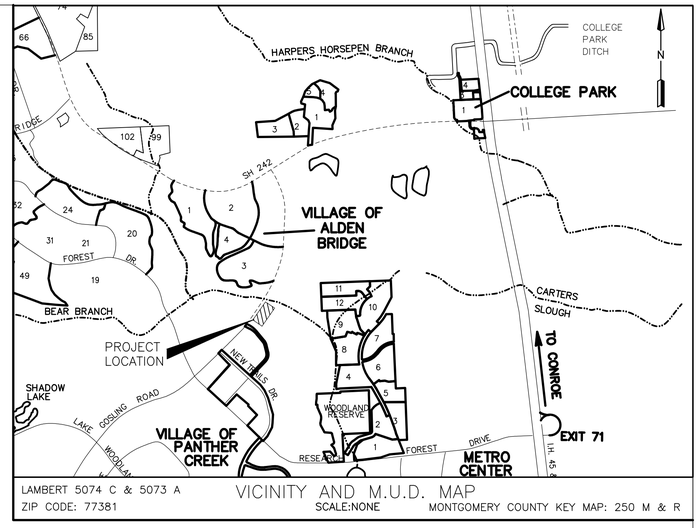
GOSLING ROAD SPORTS FIELDS

PHASE 1 CONSTRUCTION

THE WOODLANDS TOWNSHIP
THE WOODLANDS, TEXAS

JOB. NO. 0473-5005-401

DATE : JULY 2014



LAMBERT 5074 C & 5073 A
ZIP CODE: 77381

VICINITY AND M.U.D. MAP
SCALE:NONE

MONTGOMERY COUNTY KEY MAP: 250 M & R

1. COVER SHEET
2. GENERAL NOTES
3. CLEARING PLAN & SWPPP
4. GRADING PLAN
5. STORM WATER POLLUTION PREVENTION PLAN DETAILS

THE WOODLANDS, TEXAS
MONTGOMERY COUNTY, TEXAS

NOTES

1. THESE PLANS WERE PREPARED TO MEET OR EXCEED CITY OF HOUSTON SUBDIVISION RULES AND REGULATIONS (AS APPLICABLE) AS CURRENTLY AMENDED.

2. MONUMENTS:
ALL ELEVATIONS SET TO NGS. NGVD. 29,
DATUM: NAD 27, 1964 ADJUSTMENT
SCALE FACTOR: 0.99999676

MONUMENT DESIGNATION TC-49 ELEV. 143.93
5/8-INCH IRON ROD W/ALUMINUM CAP SET IN CONCRETE STAMPED TC-49
LOCATED BY COORDINATES X=3,116,813.71
Y=867,463.68

MONTGOMERY COUNTY
ENGINEERING DEPARTMENT

Approved: _____
County Engineer

Date: _____

ACCORDING TO EFFECTIVE FEMA MAP 48339C0520G DATED DECEMBER 19, 1996, THIS SITE LIES WITHIN ZONE X. BFE =129.00

ONE-CALL NOTIFICATION SYSTEM
CALL BEFORE YOU DIG!!!
(713) 223-4567 (IN HOUSTON)
(NEW STATEWIDE NUMBER OUTSIDE HOUSTON)
1-800-545-6005

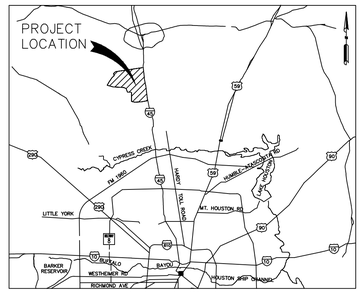
THIS DOCUMENT IS ISSUED FOR INTERIM REVIEW AND IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMITTING PURPOSES.

VICENTE SALAZAR, III, P.E.
TEXAS P.E. #98517

ISSUED ON:
JUL 23 2014

APPROVED FOR CONSTRUCTION

BY _____ DATE _____



LOCATION MAP

ILMS NO: LOG NO:

LJA Engineering, Inc.
2929 Briarpark Drive
Suite 600
Houston, Texas 77042
Phone 713.953.5200
Fax 713.953.5026
FRN - F-1386

CONTRACTOR SHALL NOTIFY THE CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING, OFFICE OF THE CITY ENGINEER, 48 HOURS BEFORE STARTING WORK ON THIS PROJECT. PHONE: 832-394-9098

PRIOR TO THE CONSTRUCTION OF THESE FACILITIES WITHIN OR BY THE DISTRICT, THE DISTRICT OR ITS ENGINEER WILL GIVE WRITTEN NOTICE BY REGISTERED OR CERTIFIED MAIL TO THE DIRECTOR OF PUBLIC WORKS & ENGINEERING, CITY OF HOUSTON, STATING THE DATE SUCH CONSTRUCTION WILL BE COMMENCED.

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

LJA Engineering, Inc.

SURVEYED BY:

FB NO.:

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

WATER	STREET & BRIDGE
WASTEWATER	TRAFFIC
STORM	STORM WATER QUALITY
FACILITIES	TRANSPORTATION
CITY ENGINEER	FOR CITY OF HOUSTON USE ONLY CITY DWG NO.:
DIRECTOR OF PUBLIC WORKS AND ENGINEERING	
SHEET No: 1 OF 5	

THE WOODLANDS VILLAGE OF INDIAN SPRINGS SECTION 31 - JOB NO. 0472-0231

Date\Time : Wed, 23 Jul 2014 - 4:46pm
Path\Name : L:\Vabazar\Gosling Sportsfields\01_cover.dwg

Plans subject to revision

GENERAL NOTES

1. WATER LINES, WASTEWATER COLLECTION SYSTEMS, AND DRAINAGE SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING'S "STANDARD CONSTRUCTION SPECIFICATIONS (MOST RECENT ISSUE JULY 2011) AND "STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING" (MOST RECENT ISSUE JULY 2011) WITH ALL SUBSEQUENT AMENDMENTS ADDED THERETO UNLESS OTHERWISE NOTED AND APPROVED ON THESE PLANS. THE DESIGN MUST AGREE WITH THE MINIMUM STANDARDS ESTABLISHED IN THE LATEST ISSUE OF THE "INFRASTRUCTURE DESIGN MANUAL" (MOST RECENT ISSUE JULY 2011). NOTE THAT PLAN SIGNATURES AND LETTERS OF CAPACITY AVAILABILITY FOR STORM, WASTEWATER, AND WATER EXPIRE AFTER ONE YEAR AND THAT THE LATEST EDITIONS OF DESIGN RULES, SPECIFICATIONS, STANDARD DETAILS AND MANUALS SHALL GOVERN AS OF DATES FOR RESIGNING.
2. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING PUBLIC OR PRIVATE UTILITY LINES, INCLUDING BUT NOT LIMITED TO PAVING, WATER LINES, WASTEWATER COLLECTION SYSTEMS, STORM SEWERS, AND TRAFFIC SIGNALS DURING CONSTRUCTION. ALL DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH CURRENT EDITIONS OF CITY OF HOUSTON STANDARD CONSTRUCTION SPECIFICATIONS, DESIGN DETAILS AND DESIGN MANUALS. REPAIRS SHALL BE AT NO COST TO THE CITY OF HOUSTON, DISTRICT OR OWNER.
3. CONTRACTOR SHALL CONTACT THE FOLLOWING A MINIMUM OF 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

UTILITY COORDINATING COMMITTEE . . . . . (713) 223-4567 OR 1-800-545-6005

COMCAST CABLE. . . . . MR. GREG WIECEK . . . . . (713) 895-2528

A.T. & T. . . . . .MR. AL FRITSCA . . . . . .(713) 739-2668

S.W. BELL TELEPHONE . . . . . .MR. PAUL BRAUNE . . . . . .(281) 379-7511

T.C.I. CABLE . . . . . MR. CRAIG FORREST . . . (281) 292-3794

MONTGOMERY COUNTY ENGR. . . . . MR. DAN WILDS, P.E. . . . .(936) 539-7833

MONTGOMERY COUNTY PRECINCT #3 . . . . . MR. MATT BEASLEY . . . .(936) 539-7817

HOUSTON PIPELINE CO. . . . . MR. DAVID HOHL . . . . . (281) 652-2410

CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING,
ENGINEERING CONSTRUCTION DIVISION . . . . . .(713) 863-1450
FAX: (832) 395-4424

4. ALL AREAS DISTURBED ALONG SIDE AND BACK-OF-LOT EASEMENTS OR OTHER UNNECESSARY DISTURBANCES AS A RESULT OF CONSTRUCTION WORK SHALL BE SEEDED AND FERTILIZED IN ACCORDANCE WITH SEEDING SPECIFICATIONS (NO SEPARATE PAY).
5. ALL STATIONS ARE CENTERLINE OF STREET RIGHT-OF-WAY UNLESS OTHERWISE NOTED.
6. THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE FLAGMEN, SIGNING, STRIPING AND WARNING DEVICES, ETC., DURING CONSTRUCTION BOTH DAY AND NIGHT IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
8. SUBGRADES FOR ALL TYPES OF ROADS SHALL BE PLOWED AND GRUBBED, HAVE ALL ORGANIC MATERIAL REMOVED, SHALL BE ACCURATELY SHAPED PRIOR TO PLACING BASE MATERIAL OR PAVEMENT THEREON, AND SHALL BE COMPACTED TO PROVIDE FOR UNIFORM DENSITY CAPABLE OF SUPPORTING THE PAVEMENT LOADS TO BE IMPOSED THEREUPON. SUBGRADES SHALL BE STABILIZED TO A MINIMUM DEPTH OF SIX INCHES AND SHALL COMPLY WITH THE APPROVED GEOTECHNICAL REPORT.
SUBGRADE SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY. (ASTM D-698) WITH A MOISTURE CONTENT OF -2% TO +3% OF OPTIMUM MOISTURE. COMPACTION TO BE ACCOMPLISHED BY USE OF APPROVED AND ACCEPTABLE MIXING AND ROLLING EQUIPMENT AND CONSTRUCTION METHODS. THE TREATED SUBGRADES SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

100% PASSING THE 1-¾ SIEVE
80% PASSING THE ¾ SIEVE

9. DESCRIPTION OF BENCH MARK:
WOODLANDS DEVELOPMENT COMPANY, LP.
MONUMENTS: ALL ELEVATIONS SET TO NGS. NGVD. 29
DATUM: NAD 27, 1964 ADJUSTMENT
SCALE FACTOR: 0.99999676

MONUMENT DESIGNATION TC-49 ELEV. 143.93 5/8
INCH IRON ROD W/ ALUMINUM CAP SET IN
CONCRETE STAMPED TC-49 LOCATED BY COORDINATES
X=3,116,813.71, Y=867,463,68

100 YR. W.S.E. = 128.00 (2001 ADJUSTMENT)
FIRM PANEL NO. 48339C0540 F, MAP REVISED 12-19-96
NGS, NGVD, 1929 DATUM (1964 ADJUSTMENT)

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FIRM PANEL NO. 48339C0540 F, MAP REVISED 12-19-96
NGS, NGVD, 1929 DATUM (1964 ADJUSTMENT)

14. CONTRACTOR SHALL NOTIFY THE OFFICE OF THE CITY ENGINEER, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING IN WRITING PRIOR TO COMMENCING CONSTRUCTION.
15. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITIONS OR BETTER.
16. CONTRACTOR SHALL COMPLY WITH LATEST EDITION OF OSHA REGULATIONS AND THE STATE OF TEXAS LAWS CONCERNING EXCAVATION.

SANITARY SEWER NOTES

1. THIS SET OF CONSTRUCTION PLANS IS NOT TIED INTO THE CITY OF HOUSTON MONUMENTATION DUE TO THE FACT NO MONUMENTS EXIST WITHIN 2000 FEET OF THE PROJECT.
2. CITY OF HOUSTON SIGNATURES ARE VALID FOR 1 (ONE) YEAR ONLY AFTER DATE & SIGNING OF PLANS.
3. DEFLECTION TESTING OF THE GRAVITY SEWER LINE SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5.0%. THE DEFLECTION TEST SHALL BE CONDUCTED USING A RIGID 9 RUNNER MANDREL HAVING AN OUTSIDE DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES. I. & E. TEST FOR SANITARY SEWER SYSTEM WILL BE IN ACCORDANCE WITH CITY OF HOUSTON REQUIREMENTS, FOR LOW PRESSURE AIR TEST. AS PER TAC 317.2
4. CHEMICALLY WELDED SANITARY SEWER JOINTS ARE NOT ACCEPTABLE. USE RUBBER GASKETED BELL & SPIGOT SANITARY SEWER JOINTS.
5. ALL SANITARY SEWER ADAPTERS REQUIRED TO CONNECT TO EXISTING SANITARY SEWERS ARE INCIDENTAL TO THE BID ITEM FOR SANITARY SEWER PIPE.
6. WATER & SANITARY SEWER THAT ARE PARALLEL MUST BE INSTALLED IN SEPARATE TRENCHES WITH NO LESS THAN 9' (NINE FEET) MIN. CLEARANCE. ADDITIONAL CLEARANCE CRITERIA PER THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY IN 317.13 APPENDIX "E". WHERE IT IS NOT POSSIBLE TO ACHIEVE THE NINE FOOT SEPARATION DISTANCE THE FOLLOWING CONDITIONS SHALL BE MET: THE SEWER SHALL HAVE A MINIMUM PRESSURE RATING OF 150 PSI, THE VERTICAL SEPARATION DISTANCE SHALL BE A MINIMUM OF TWO FEET BETWEEN OUTSIDE DIAMETERS, THE HORIZONTAL SEPARATION DISTANCE SHALL BE A MINIMUM OF NINE FEET BETWEEN OUTSIDE DIAMETERS, THE SEWER AND WATERLINES SHALL BE INSTALLED IN SEPARATE TRENCHES AND THE SEWER SHALL BE LOCATED BELOW THE WATER LINE.
7. CENTER JOINT OF SANITARY SEWER AT WATERLINE CROSSINGS. PROVIDE CEMENT SAND BACKFILL FOR THIS JOINT. USE PRESSURE PIPE IF VERTICAL SEPARATION _ 9'. CENTER ONE JOINT OF GREEN AWWA C-900, DR-18, SANITARY SEWER PIPE WITH TWO ADAPTER COUPLINGS CONNECTING WITH ASTM D-3034 SANITARY SEWER PIPE CROSSING UNDER PROPOSED WATER LINE.
8. ALL LONG SIDE AND SHORT SIDE SERVICE LEADS SHALL BE SDR26 PVC D2241 PR160 PRESSURE PIPE WITH A MINIMUM 18 FOOT JOINT OF SANITARY LEAD CENTERED AT CROSSING.
9. IF CLEARANCE IS BETWEEN 12 INCHES TO TWO FEET, ONE 20 FOOT JOINT OF C-900 PVC, 150 PSI WATERLINE SHALL BE CENTERED AT SANITARY CROSSING. PROVIDE 2' MIN. VERTICAL SEPARATION BETWEEN OVERHEAD SEWERS AND DEEPER WATER LINES.
10. ALL SANITARY SEWER PIPE 6" TO 10" SHALL BE SDR26 AND 12" TO 15" TO BE SDR 35 P.V.C. SEWER PIPE MEETING ASTM SPECIFICATION D-3034. ALL 12" FORCE MAIN SHALL BE AWWA C-900,DR-18,P.V.C. (GREEN COLOR) PIPE UNLESS OTHERWISE NOTED.
11. SANITARY SEWERS UNDER OR WITHIN (1) FT. OF THE PAVEMENT SHALL BE CONSTRUCTED AS PER CITY OF HOUSTON DWG NO.02317-03 (OCT. 2002) (100 PSI MIN. TEST RESULTS ARE STILL REQUIRED).
12. ALL 6" SANITARY SEWER HOUSE CONNECTION STUBS SHALL BE: 6"(I) MIN.; AND LAID AT 0.70% MINIMUM GRADE.
13. MANHOLES (AS DESIGNATED ON PLAN & PROFILE) SHALL INCLUDE INFLOW PROTECTORS WHICH SHALL BE INCIDENTAL TO CONSTRUCTION OF MANHOLES. (NO SEPARATE PAY)
14. NO CAST IN PLACE MANHOLES SHALL BE USED. THE STANDARD PRE-CAST MANHOLE SHALL BE PER LATEST CITY OF HOUSTON CONCRETE MANHOLE DETAIL.
15. "UNLESS MANHOLES CAN BE MADE WATERTIGHT AND TESTED FOR NO LEAKAGE, THEY MUST BE INSTALLED SO AS TO PROVIDE A MINIMUM OF NINE FEET OR HORIZONTAL CLEARANCE FROM AN EXISTING OR PROPOSED WATER LINE. IF THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE WATERLINE MUST BE ENCASED IN A JOINT OF 150 PSI PRESSURE CLASS PIPE AT LEAST 24 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE WATERLINE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT 5 FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHALL BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEAL."
16. RIM ELEVATIONS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. UTILITY CONTRACTOR SHALL ADJUST RIM ELEVATIONS TO 0.3 FEET MIN. TO 0.5 FEET MAX. ABOVE THE FINISHED GRADE AT EACH MANHOLE LOCATION AFTER PAVEMENT CONTRACTOR HAS COMPLETED FINAL GRADING (NO SEPARATE PAY). SLOPED FILL SHALL BE ADDED FOR FOR STORM WATER DRAINAGE AWAY FROM THE MANHOLE RIM.
17. CONTRACTOR SHALL FIELD VERIFY EXISTING NATURAL GROUND SHOTS PRIOR TO MANHOLE CONSTRUCTION.
18. WATER, SANITARY SEWER, AND DRAINAGE CONTRACTOR SHALL, AT COMPLETION OF HIS WORK, FILL AND GRADE ALL UTILITY EASEMENTS (WET AND DRY) AS WELL AS LOW SPOTS IN LOTS FOR POSITIVE DRAINAGE, AS DIRECTED BY THE OWNER (NO SEPARATE PAY).
19. UNDERGROUND CONTRACTOR SHALL PERFORM TOPOGRAPHIC SURVEY OF R.O.W. (LEFT AND RIGHT) EVERY 100 FEET, PLOT AND SUBMIT TO THE WOODLANDS CORPORATION PRIOR TO CONSTRUCTION (NO EXTRA PAY).
20. ALL SANITARY SEWER BEDDING SHALL BE AS PER CITY OF HOUSTON DWG. NO. 02317-03 (OCT. 2002) UNLESS OTHERWISE INDICATED.
21. IN WET STABLE TRENCH CONSTRUCTION, BEDDING AND BACKFILL FOR WET SAND CONSTRUCTION OF SANITARY SEWER SHALL BE CONSTRUCTED AS PER CITY OF HOUSTON DWG. NO. 02317-01 (OCT. 2002).
22. ALL SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF HOUSTON'S "STANDARD CONSTRUCTION SPECIFICATION FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, STREET PAVING, AND TRAFFIC" AND ALL CURRENT AMENDMENTS THERETO AND BE SUBJECT TO A STANDARD EXFILTRATION TEST. TESTS ARE TO BE PERFORMED ON THE TOTAL FOOTAGE OF SEWER LINE INCLUDED IN THE PROJECT. REQUIREMENTS OF TEXAS ADMINISTRATIVE CODE, TITLE 30/CHAPTER 317, "DESIGN CRITERIA FOR SEWERAGE SYSTEMS" SHALL GOVERN WHERE CONFLICTS EXIST EXCEPT WHERE CITY REQUIREMENTS ARE OF HIGHER STANDARDS.
23. ALL SDR-26 PVC PIPE SHALL MEET ASTM SPECIFICATION D-3034 AND USE "FULL BODIED" SDR-26 PVC FITTINGS WITH APPROPRIATE ADAPTERS AND SHALL HAVE A CELL CLASSIFICATION OF 12364-B AS DEFINED IN ASTM D-1784 AND SHALL HAVE DIP SIZE OD AND RUBBER GASKET BELL-AND-SPIGOT TYPE JOINT ENDS, UNLESS OTHERWISE NOTED.
24. INFILTRATION, EXFILTRATION OR LOW-PRESSURE AIR TEST: EITHER OF THE FOLLOWING TESTS SHALL BE PERFORMED AS PER TAC, TITLE 30 317.2 WITHIN THE SPECIFIED TOLERANCES ON ALL GRAVITY SEWERS.
   A. INFILTRATION OR EXFILTRATION TEST: TOTAL LEAKAGE AS DETERMINED BY A HYDROSTATIC HEAD TEST SHALL NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MIN. TEST HEAD OF TWO (2) FT.
   B. LOW-PRESSURE AIR TEST: PERFORM TEST ACCORDING TO UNI-B-6-90 OR OTHER APPROPRIATE PROCEDURES. FOR SECTIONS OF PIPE LESS THAN 36" (INCH) AVERAGE INSIDE DIAMETER, THE MINIMUM ALLOWABLE TIME FOR PRESSURE DROP FROM 3.5 P.S.I.G. TO 2.5 P.S.I.G. SHALL BE AS FOLLOWS:

   6" 340 SECONDS OR 0.855(L) FOR TEST LENGTHS GREATER THAN 398'
   8" 454 SECONDS OR 1.520(L) FOR TEST LENGTHS GREATER THAN 298'
   10" 567 SECONDS OR 2.374(L) FOR TEST LENGTHS GREATER THAN 239'
   15" 850 SECONDS OR 5.342(L) FOR TEST LENGTHS GREATER THAN 159'
   18" 1020 SECONDS OR 7.693(L) FOR TEST LENGTHS GREATER THAN 133'

   WHERE L=LENGTH OF LINE OF SAME PIPE SIZE IN FEET

25. ALL INDIVIDUAL SEWER SEGMENTS (BOUNDED BY TWO MANHOLES) WILL USE THE SAME PIPE TYPE BETWEEN ANY INDIVIDUAL SEGMENT'S TWO MANHOLES. ANY SPECIAL (NON-STD.) SEWER PIPE REQUIRED FOR WATER LINE AND/OR SAN. SWR. PIPE PROTECTION (INCLUDING AUGERING, TUNNELING, ETC.) MAY USE AN ADEQUATELY LARGER SIZE GREEN C-900/905 DR-18(TO 26) PVC OR DIP(18"-20' (+) LONG) JOINT SEGMENT AS CASING PIPE W/ SPACERS AND END SEALS AS NECESSARY.
26/ USE THE SAME TYPE OF SEWER PIPE FROM MH TO MH WITH NO PIPE TYPE CHANGE IN BETWEEN EACH SEPERATE PAIR OF MHS. IDENTICAL DIP-SIZED SEWER PIPE BELL & SPIGOT ENDS ARE REQUIRED FOR ALL SEWER PIPE USED FROM MH TO MH WHERE DIP OR GREEN C-900 (DR 18) PVC PIPE SECTIONS (18'-20'(+)) ARE USED FOR WL CROSSING(S) AND/OR SEWER AUGERING AND/OR JACKING, AND/OR SHALLOW BURIAL.

WATER NOTES

1. WATER MAINS SHALL HAVE MINIMUM OF 4' COVER FROM TOP OF CURB, EXCEPT 16" AND LARGER WATER LINES SHALL HAVE MINIMUM OF 5' COVER FROM TOP OF CURB.
2. CONTRACTOR SHALL PROVIDE 12" MINIMUM CLEARANCE AT STORM SEWER AND WATER LINE CROSSINGS.
3. A.) IF WATER AND SANITARY SEWER CLEARANCE IS LESS THAN 2 FEET:
   1.) MINIMUM 18-FOOT JOINT OF SANITARY SEWER, 150 PSI LINED DUCTILE IRON OR PVC PIPE CENTERED AT THE WATERLINE; 12-INCH ABSOLUTE MINIMUM CLEARANCE.
   B.) IF CLEARANCE IS BETWEEN 2 TO 9 FEET:
   1.) CENTER A MINIMUM 18-FOOT JOINT OF 150 PSI LINED DUCTILE IRON OR PVC PIPE AT WATER LINE. OR
   2.) USE CEMENT-STABLIZED SAND BACKFILL FOR ALL PORTIONS OF SEWER WITHIN 9' OF WATER LINE, (MINIMUM 2? SACKS CEMENT PER CUBIC YARD OF SAND) STARTING AT A POINT 6 INCHES BELOW THE BOTTOM OF SANITARY SEWER TO 6 INCHES ABOVE THE TOP OF SANITARY SEWER AND ONE QUARTER OF THE PIPE DIAMETER OR 6 INCHES, WHICHEVER IS GREATER, ON THE SIDE OF THE SANITARY SEWER.
   MINIMUM ONE FULL SECTION OF SANITARY SEWER, 150 PSI LINED DUCTILE IRON OR PVC PIPE AT THE WATER LINE, AND PROVIDE RESTRAINED JOINTS FOR BOTH WATER AND SANITARY SEWER LINES AT EACH END OF NEW PIPE SECTION.
4. COMPLETED WATERLINES MUST BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651, "DISINFECTING WATER MAINS."
5. ALL 2" BLOW-OFF VALVES MUST BE CONSTRUCTED ON COMMON LOT LINE.
6. ALL WATER MAINS UNDER STREET PAVEMENT, IF NOT STEEL SECTION, SHALL BE P.V.C. PIPE. SIZES 4 THRU 12 INCH SHALL BE AWWA C-900 CLASS 150 DR-18. (5'B/C TO 5'B/C)
7. ALL FLUSHING VALVE UNITS SHALL BE LOCATED 3' BACK OF CURB ON CURB AND GUTTER STREETS. FOR STREETS HAVING NO CURB, THE FLUSHING VALVE SHALL BE LOCATED INSIDE RIGHT-OF-WAY.
8. FLUSHING VALVE UNIT CONSISTS OF: ONE LINE SIZE X 6" TEE, 6"CAST IRON OR P.V.C. PIPE LEAD, 6" GATE VALVE WITH BOX, AND ONE FLUSHING VALVE WITH 4' MIN. BURY.
9. A CUSTOMER SERVICE INSPECTION CERTIFICATION COMPLETED BY A LICENSED PLUMBING INSPECTOR OR WATER SUPPLY PROTECTION SPECIALIST MUST BE PROVIDED TO THE WOODLANDS JOINT POWERS AGENCY AT COMPLETION OF THE BUILDING AND PRIOR TO THE UTILITY DISTRICT PROVIDING CONTINUOUS WATER SERVICE TO THE OWNER.
10. ALL BACKFLOW PREVENTION DEVICES MUST BE TESTED BY A LICENSED BACKFLOW TESTER UPON INITIAL INSTALLATION AND THE CERTIFICATE INDICATING THE DEVICE IS OPERATING WITHIN SPECIFICATIONS SUBMITTED TO THE WOODLANDS JOINT POWERS AGENCY.
11. PRIOR TO WATER SERVICE BEING PROVIDED (except for construction water), THE APPLICANT MUST COMPLETE A RETURN TO THE WOODLANDS JOINT POWERS AGENCY UTILITY DISTRICT OFFICE AN "INDUSTRIAL WASTE SURVEY". THE FORMS FOR COMPLETING THE SURVEY CAN BE OBTAINED FROM THE UTILITY DISTRICT OFFICE BY CALLING 281.367.1271, EXTENSION 4.

STORM SEWER NOTES

1. STORM SEWER SHALL BE REINFORCED CONCRETE PIPE (C-76 CLASS III) AND SHALL BE INSTALLED, BEDDED AND BACKFILLED IN ACCORDANCE WITH MONTGOMERY COUNTY OR CITY OF HOUSTON STANDARD SPECIFICATIONS WHICH EVER IS MORE STRINGENT (COH DRAWING NOS. 02317-02, 02317-03, 02317-05, 02317-06 AND 02317-07 (OCT. 2002) AS APPLICABLE). WHEN FULLY ASPHALT COATED CORRUGATED GALVANIZED METAL PIPE (CGMP) IS SPECIFIED IN THE PLANS, THE BEDDING AND BACKFILL SHALL BE INSTALLED PER CITY OF HOUSTON DRAWINGS NO. 02317-02 AND 02317-05, 02317-07 (OCT. 2002), AS APPLICABLE UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
2. ALL STORM SEWERS CONSTRUCTED IN SIDE LOT EASEMENTS SHALL BE R.C.P. (C-76 CLASS III) AND SHALL BE BEDDED IN ACCORDANCE WITH CITY OF HOUSTON DRAWING NOS. 02317-02, 02317-03, 02317-05, 02317-06 AND 02317-07 AS APPLICABLE. ALL STORM SEWERS LOCATED IN SIDE LOT EASEMENTS SHALL BE CONSTRUCTED IN THE MIDDLE OF A MINIMUM 20-FOOT DEDICATED STORM SEWER EASEMENT.
3. ALL STORM SEWERS UNDER PROPOSED OR FUTURE PAVEMENT AND TO A POINT ONE (1) FOOT BACK OF ALL PROPOSED OR FUTURE CURBS SHALL BE BACKFILLED WITH 1 1/2-SACK CEMENT/C.Y. STABILIZED SAND TO WITHIN ONE (1) FT. OF SUBGRADE. THE REMAINING DEPTH OF TRENCH SHALL BE BACKFILLED WITH SUITABLE EARTH MATERIAL.
4. ALL TRENCH BACKFILLS SHALL BE IN 8" LIFTS, WITH TESTS TAKEN AT 100 FOOT INTERVALS ON EACH LIFT, AND MECHANICALLY COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D-698/AASHTO T99).
5. CIRCULAR AND ELLIPTICAL REINFORCED CONCRETE PIPE SHALL BE INSTALLED WITH RUBBER GASKET BELL AND SPIGOT JOINTS CONFORMING TO ASTM C443 AND ASTM C877 RESPECTIVELY.
6. ALL STORM SEWER PIPES AND INLET LEADS SHALL BE 24-INCH AND LARGER R.C.P. (C-76, CLASS III).
7. ALL PROPOSED PIPE STUB-OUTS FROM MANHOLES AND INLETS ARE TO BE PLUGGED WITH 8" BRICK WALLS UNLESS OTHERWISE NOTED.
8. CONTRACTOR SHALL PROVIDE 12" MINIMUM CLEARANCE AT STORM SEWER AND WATER LINE CROSSINGS.
9. ADJUST MANHOLE COVERS TO GRADE CONFORMING TO REQUIREMENTS OF SECTION 02086-ADJUSTING MANHOLES, INLETS AND VALVE BOXES TO GRADE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ANY BACKSLOPE DRAINAGE SYSTEMS DISTURBED AS A RESULT OF HIS WORK.
11. ALL DITCHES SHALL BE REGRADED TO PROPOSED ELEVATIONS TO INSURE PROPER DRAINAGE. ALL OUTFALLS SHALL BE PROPERLY BACKFILLED AND COMPACTED AND ALL DISTURBED AREAS SHALL BE REGRADED, SEEDED, AND FERTILIZED WITHIN 10 WORKING DAYS OF EACH OCCURRENCE. (NO SEPARATE PAYMENT).
12. ALL DRIVEWAYS WILL BE LOCATED TO AVOID EXISTING CURB INLET STRUCTURES.
13. THE CONTRACTOR SHALL NOTIFY MONTGOMERY COUNTY ENGINEERING DEPARTMENT 48 HOURS IN ADVANCE OF COMMENCING CONSTRUCTION.
14. GUIDELINES SET FORTH IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" SHALL BE OBSERVED.
15. ALL STORM SEWER MANHOLES SHALL BE CITY OF HOUSTON TYPE "C" UNLESS OTHERWISE NOTED. RACK OVER MANHOLE TO MISS PROPOSED CURB IF CONFLICT EXISTS (MAXIMUM RACK OF 1" PER COURSE OF BRICK).
16. RIM ELEVATIONS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. UTILITY CONTRACTOR SHALL ADJUST RIM ELEVATIONS TO 0.3 FEET ABOVE THE FINISHED GRADE AT EACH MANHOLE LOCATION AFTER PAVEMENT CONTRACTOR HAS COMPLETED FINAL GRADING (NO SEPARATE PAY). SLOPED FILL SHALL BE ADDED FOR STORM WATER DRAINAGE AWAY FROM THE MANHOLE RIM.
17. ALL TYPE "E" INLETS SHALL HAVE 18 INCH IRON BARS ACROSS OPENINGS AS PER CITY OF HOUSTON DWG. NO. 02632-09.
18. ALL STATIONS ARE CENTERLINE OF STREET RIGHT-OF-WAY UNLESS OTHERWISE NOTED.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ANY BACKSLOPE DRAINAGE SYSTEMS DISTURBED AS A RESULT OF HIS WORK.
20. THE UTILITY CONTRACTOR SHALL ROUGH CUT ALL ROADSIDE SWALES IN PROPER ALIGNMENT AND SLOPE TO WITHIN 0.2' OF FINISHED GRADE. THE PAVING CONTRACTOR SHALL COMPLETE GRADING OF ROADSIDE SWALES TO FINAL GRADE ALIGNMENT AND RESTORE ALL ERODED AREAS WITHIN RIGHT-OF-WAY FOR SEEDING AND FERTILIZATION.
21. THE CONTRACTOR SHALL RESEED ALL DRAINAGE EASEMENT AREAS DISTURBED AS A RESULT OF HIS WORK. (NO SEPARATE PAY)
22. CONTRACTOR SHALL FIELD VERIFY EXISTING NATURAL GROUND SHOTS PRIOR TO MANHOLE CONSTRUCTION.
23. STORM SEWERS & PROPOSED OVERFLOW SWALES SHALL BE MAINTAINED BY M.C.M.U.D. # 60

PAVING NOTES

1. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY MONTGOMERY COUNTY FOR CONSTRUCTION OF UTILITY PIPELINES WITHIN THE COUNTY ROAD RIGHT-OF-WAY FOR THE OWNER. (NO SEPARATE PAY)
2. PAVING CONTRACTOR SHALL PROTECT WATER, SEWER, AND DRAINAGE FACILITIES; AND WILL REPLACE AT HIS EXPENSE ANY FACILITIES DAMAGED DURING PAVING OPERATIONS.
3. PAVING SHALL BE IN ACCORDANCE WITH "MONTGOMERY COUNTY SUBDIVISION RULES AND REGULATIONS" RELATING TO THE APPROVAL AND ACCEPTANCE OF IMPROVEMENTS IN SUBDIVISIONS OR RESUBDIVISIONS AND THE LATEST REVISIONS AND/OR AMENDMENTS OF SAME.
4. FILL AREAS NOTED ON PLANS SHALL BE FILLED IN LAYERS NOT EXCEEDING 8" IN DEPTH AND EACH COMPACTED TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY AND FILL AREA SHALL BE SEEDED AND FERTILIZED WITHIN 10 WORKING DAYS.
5. UTILITY CONTRACTOR SHALL PROVIDE TEMPORARY SILT BARRIER FENCE ON ALL NON-CURB INLETS WHICH WILL REMAIN IN PLACE AFTER UNDERGROUND CONTRACT IS COMPLETE.
6. UTILITY CONTRACTOR SHALL PROVIDE SILT BARRIER FENCE ON ALL STAGE I CURB INLETS. (NO SEPARATE PAY)
7. EXISTING PAVEMENTS, CURBS, SIDEWALKS, AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO CITY OF HOUSTON STANDARDS.
8. CONDITION OF THE ROAD AND / OR RIGHT-OF-WAY, UPON COMPLETION OF JOB, SHALL BE AS GOOD AS OR BETTER THAN THE CONDITION PRIOR TO STARTING WORK.
9. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY. ALL CONSTRUCTION STORM RUNOFF SHALL COMPLY WITH THE FINAL DRAFT OF STORMWATER MANAGEMENT HANDBOOK FOR CONSTRUCTION ACTIVITIES AS PREPARED BY HARRIS COUNTY/HCFCD, AND THE CITY OF HOUSTON ALL IN COMPLIANCE WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS,
10. ALL RETURNS HAVE 25' RADIUS AT BACK OF CURB UNLESS OTHERWISE NOTED.
11. WHEN THE TOP OF CURB ELEVATION OR BOTTOM OF PAVEMENT SLAB IS ABOVE NATURAL GROUND, THE/ PAVING CONTRACTOR SHALL BACKFILL FROM THE NATURAL GROUND TO TOP OF CURB IN LIFTS NOT EXCEEDING 8 INCHES IN DEPTH, WITH TESTS TAKEN AT 100 FOOT INTERVALS ON EACH LIFT, AND MECHANICALLY COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D-698/AASHTO T99), AND SHALL FILL FROM CURB TO EDGE OF TREELINE. (NO SEPARATE PAY)
12. DOUBLE REFLECTORIZED BLUE TRAFFIC MARKERS SHALL BE PLACE 6 INCHES OFFSET OF THE CENTERLINE AT ALL FIRE FIRE HYDRANT LOCATIONS BY THE PAVING CONTRACTOR. HYDRANTS LOCATED AT INTERSECTIONS SHALL HAVE BUTTONS PLACED ON EACH SHEET.

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VICENTE SALAZAR, III, P.E.
TEXAS P.E. #98517

ISSUED ON:
JUL 23 2014

GOSLING ROAD SPORTS FIELDS
THE WOODLANDS TOWNSHIP
THE WOODLANDS, TEXAS

GENERAL NOTES

LJA Engineering, Inc.
2929 Briarpark Drive
Suite 600
Houston, Texas 77042
Phone 713.953.5200
Fax 713.953.5026
FRN - F-1386

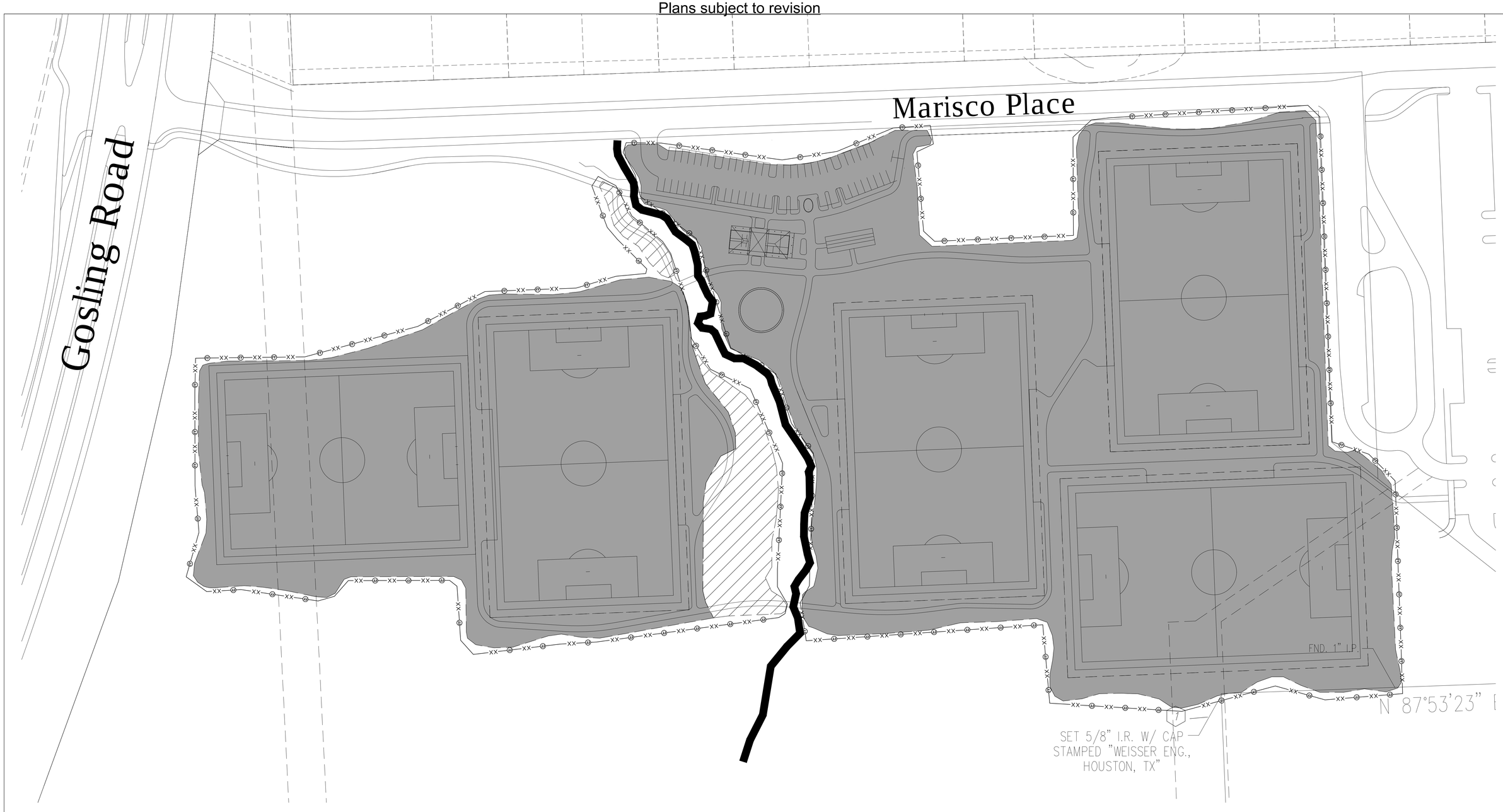
LJA PROJECT NO.: 0472-5005

DRAWN: M.F.B. DESIGN: M.F.B. DATE: JULY 2014

SCALE:

Date\Time : Wed, 23 Jul 2014 - 4:47pm
Path\Name : L:\salazar\Gosling Sports fields\02_notes.dwg

Plans subject to revision



LEGEND

= FABRIC FENCE

= STABILIZED CONSTRUCTION EXIT

1 RFB = REINFORCED FABRIC FENCE

INDICATES LOCATION OF POLLUTION CONTROL MEASURE

ITEM	APPROX. QNTY.
1	20' RFB

1. CONTRACTOR SHALL ALSO INSTALL & MAINTAIN SILT BARRIER FOR INLETS AS DETAILED ON DRAINAGE DETAILS.

LEGEND

TOTAL CLEARING AREA (18.02 AC)

SELECTIVE CLEARING AREA (0.64 AC)

N

GOSLING ROAD SPORTS FIELDS
THE WOODLANDS TOWNSHIP
THE WOODLANDS, TEXAS

CLEARING PLAN
& SWPPP

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LJA PROJECT NO.: 0472-5005

DRAWN: M.F.B. DESIGN: M.F.B. DATE: JULY 2014

SCALE: 1" = 60'

SHEET NO. 3 OF 5

Date\Time : Wed, 23 Jul 2014 - 4:47pm
Path\Name : L:\salazar\Gosling Sportsfields\03_clearing plan.dwg

Plans subject to revision

Gosling Road

Marisco Place

SET 5/8" I.R. W/ CAP STAMPED "WEISSER ENG., HOUSTON, TX"

FND. 1"

EXISTING STORM SEWER

N 87°53'23" E

DIRT NUMBERS

CUT – 8596 Cu. Yd.
FILL – 49278 Cu. Yd.
NET TOTAL – 40682 Cu. Yd.

LEGEND

PROPOSED GRADING
EXISTING NATURAL GROUND
131 EXISTING NATURAL GROUND ELEVATION
131 PROPOSE NATURAL GROUND ELEVATION

N

GOSLING ROAD SPORTS FIELDS
THE WOODLANDS TOWNSHIP
THE WOODLANDS, TEXAS

GRADING PLAN

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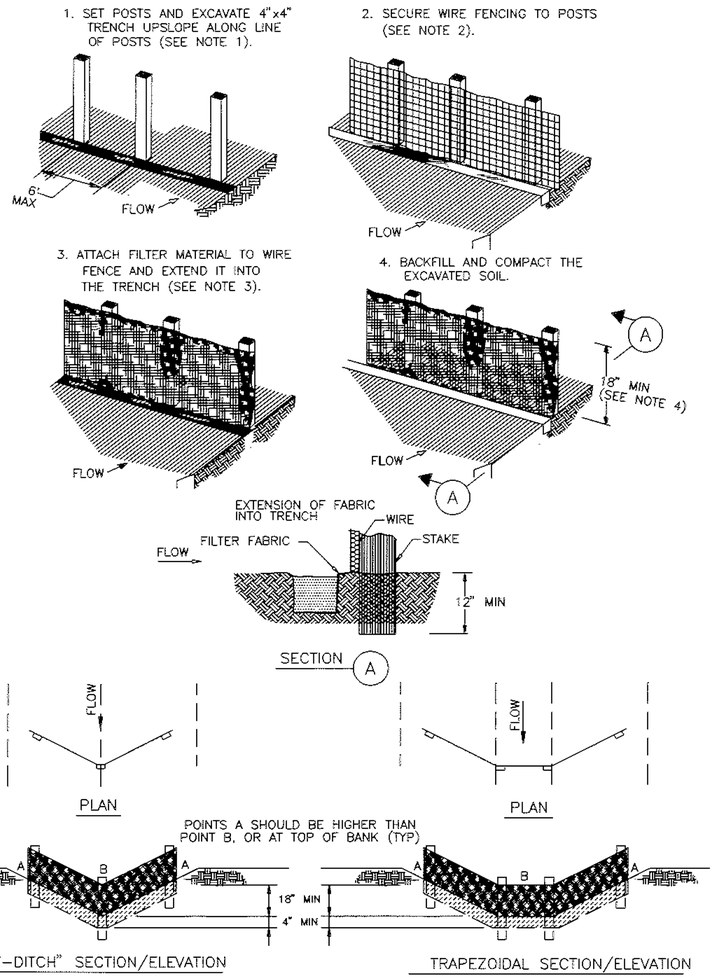
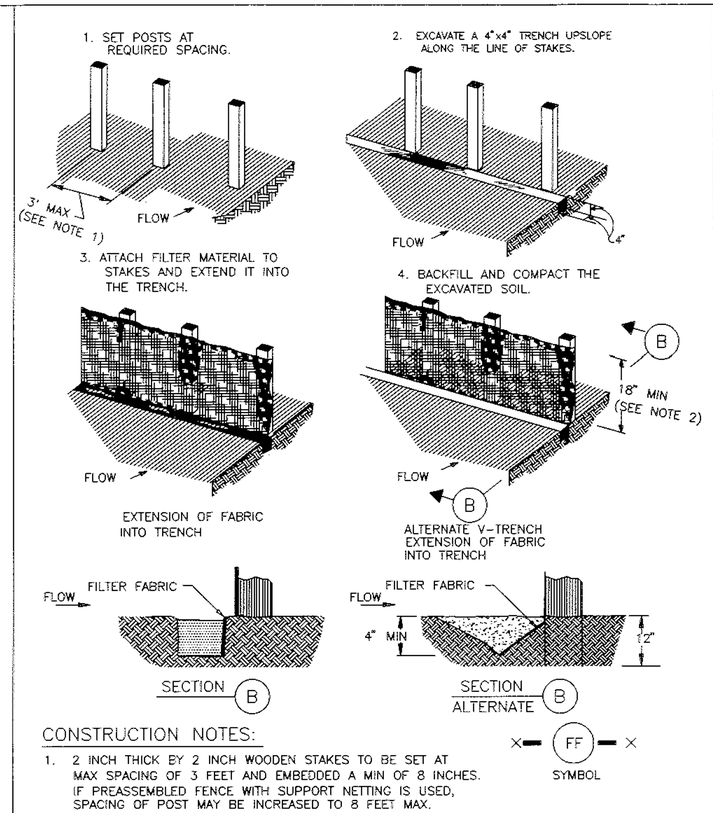


CONSTRUCTION NOTES:

1. SET 2 INCH BY 2 INCH WOODEN STAKES SPACED A MAX OF 6 FEET APART AND EMBEDDED A MIN OF 12 INCHES.
2. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH STAPLES.
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE, WITH TIES SPACED EVERY 24 INCHES AT TOP AND MIDSECTION.
4. MINIMUM HEIGHT OF FILTER SHOULD BE 18 INCHES AND A MAXIMUM OF 36 INCHES ABOVE NATURAL GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
6. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

SYMBOL

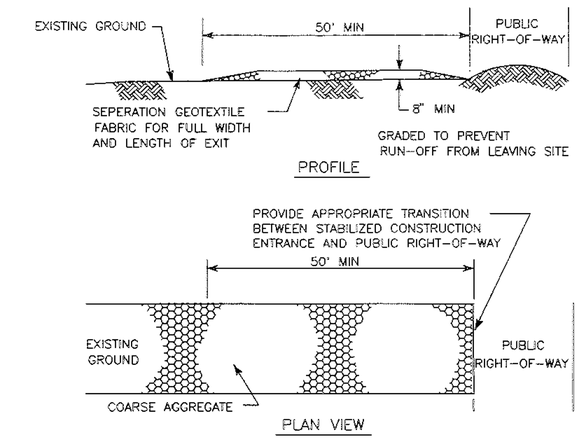
REINFORCED FILTER FABRIC BARRIER



CONSTRUCTION NOTES:

1. 2 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED FENCE WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAX.
2. ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC FENCE SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
4. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC FENCE.

FILTER FABRIC FENCE

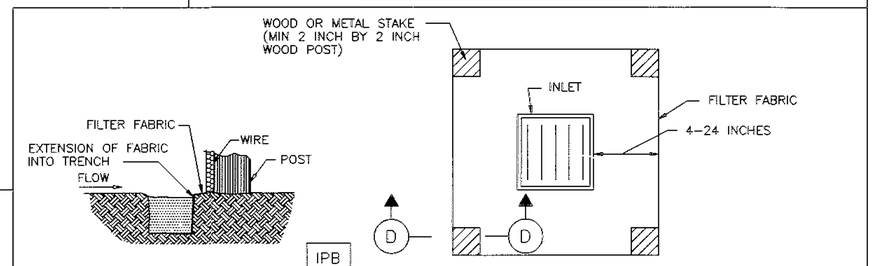


CONSTRUCTION NOTES:

1. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
2. THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
3. WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
4. STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION EXIT, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
5. STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMODATE A TRUCK WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE TRUCK WASHING AREA.
6. SEE COH STANDARD SPECIFICATION FOR STABILIZED CONSTRUCTION EXIT.
7. STABILIZED CONSTRUCTION EXIT SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.

SC
SYMBOL

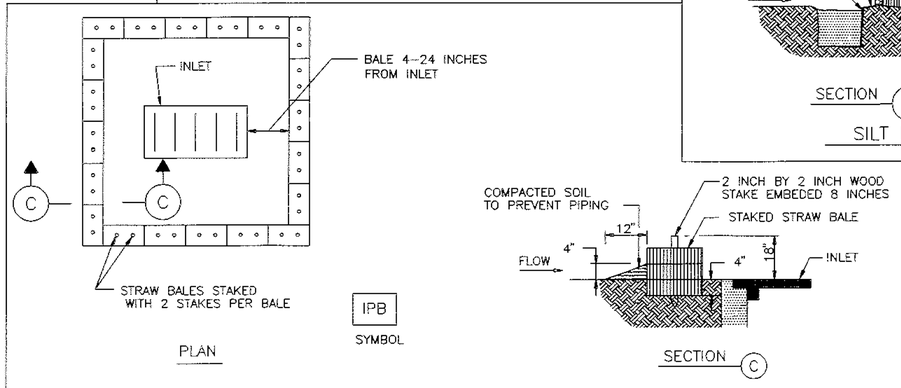
STABILIZED CONSTRUCTION EXIT



SILT FENCE INLET PROTECTION BARRIER

CONSTRUCTION NOTE:

1. SEE CONSTRUCTION NOTES FOR RFB.



STRAW BALE DROP INLET PROTECTION BARRIER

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

STORM WATER POLLUTION PREVENTION PLAN DETAILS

(NOT TO SCALE)

APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002	DWG NO: 01571-01

COH